Grace Garlatti 7th Grade Math

**June 28, 2010**

**“Review of Adding and Subtracting Integers”**

**Objective (s):**

Students will be able to add negative integers to other negative integers.

Students will be able to add positive integers to negative integers or vice versa.

Students will be able to subtract positive and negative integers.   
  
**Set Induction:**  
The teacher will give the class “Challenge Time” worksheet as a warm-up to the activities that they will participate in as class progresses. The teacher will then go over the worksheet and answer any questions the students may have.

**Learning Activities:**   
*Pirate Game*: The class will move to the computer lab. The teacher will have the students play an educational game in which they will need to add and subtract positive and negative integers in order to keep the pirate from walking the plank. The students will be able to use pencil and paper to help them to solve the math problems answer to play the game.   
  
*Interactive Lesson:* The students will work with an interactive computer program that asks them to solve subtraction of integer problems that use large numbers (into the 90s). This program will track student progress and help them to find the correct solution if they answer incorrectly. The students will be allowed to use pencil and paper to help them find the answers to the proposed questions.   
  
*Timeline*:  
Set Induction: 7 minutes  
Pirate Game: 15 minutes  
Interactive Lesson: 20 minutes  
Closure: 3 minutes

**Closure:**

The class will move back into the classroom; the teacher will assign homework and ask the class if they have any questions.

**Assessment:**

After the students have participated in the interactive lesson online, they will print out their results sheet so the teacher can clearly see who has mastered the concept and who could still use some more instruction.

**Homework:**

The students will complete Homework Assignment #5.

**Materials:**

Pencils

Paper

“Challenge Time” Worksheet

Pirate Game: <http://www.math-play.com/integers-game.html>

Interactive Lesson: <http://www.aaastudy.com/sub65_x4.htm>

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“Challenge Time”

**Solve the following math problems**.

1. 54+ (-23)=
2. 86- (-42)=
3. -109 + (-35)=
4. -37+ (-68)=

1. -811+ (-92)=

Name:­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7th Grade- Homework Assignment #5

**Solve the following math problems. Make sure to pay attention to the operation to be performed and the positive and negative signs.**

1. -25+-62=
2. 75- (-26)=
3. 31 – (-11) =
4. -49 + 24 =
5. 17 – (-14) =
6. 44 + (-74) =
7. 50 + (-39) =
8. -43 – (-13) =
9. -42 – (-36) =
10. -33 - 46 =
11. 31 –( -9) =
12. -36 + 28 =
13. -23 - 48 =
14. -39 - 35 =
15. 31 + (-6) =

**Explain how using the computer to learn math either help or hurt your learning.**

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Grace Garlatti 7th Grade Math

**June 29, 2010**

**“Multiplying Integers”**

**Objective (s):**

Students will be able to multiply positive integers and negative integers.   
Students will be able to describe what types of multiplication problems yield positive answers and which ones give way to negative answers.   
  
**Set Induction:**

The teacher will collect homework and hand out the “Multiplication Facts” worksheet. The students will have 5 minutes to answer as many multiplication facts as possible. The teacher will collect these assignments and any student who has gotten all 100 facts answered correctly will get a small prize the next day.  
  
**Learning Activities:**   
*Would My Answer be Positive or Negative?*:

The teacher will project the “Multiplying Integers: Positive of Negative?” handout onto the SmartBoard. She will also distribute a copy of this handout to the class. The class will discuss what combinations of numbers yield positive answers and which cause negative answers. The class will then solve a few multiplication problems as a whole class; the students will be called on to tell the class the next step to take in solving the problem at hand.   
  
*Work Together Time:*

The students will be given the same “Multiplication Facts” worksheet that they did at the beginning of class; however, now some of the numbers will be positive and others will be negative. The students will work with a partner to complete this worksheet. The class will then go over this worksheet as a whole.   
  
*Timeline*:  
Set Induction: 5 minutes  
Would My Answer be Positive or Negative?: 15 minutes  
Work Together Time: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will assign homework and ask the class if they have any questions.

**Assessment:**

The teacher will observe student answers during class and collect their homework assignments. She will review their homework to better see where the students are struggling.

**Homework:**

The students will complete Homework Assignment #6.

**Materials:**

“Multiplication Facts” Worksheet

SmartBoard

Pencils

Paper

“Multiplying Integers: Positive of Negative?” Handout

<http://www.math-drills.com/integers/int_all-9999_002.pdf>

Revised “Multiplication Facts” Worksheet

“Multiplying Integers:

Positive or Negative?”

|  |  |
| --- | --- |
| **Positive x Positive=Positive** | **Positive x Negative= Negative** |
| **Negative x Positive= Negative** | **Negative x Negative= Positive** |

**Is the signs are different (+,- or -,+), the answer will be negative.**

**If the signs are the same (+,+ or -,-) the answer will be positive.**

Grace Garlatti 7th Grade Math

**June 30, 2010**

**“Dividing Integers”**

**Objective (s):**

Students will be able to divide positive integers and negative integer.   
Students will be able to describe what types of division problems yield positive answers and which ones give way to negative answers.   
  
**Set Induction:**

The teacher will collect homework and hand out the “Division Facts” worksheet. The students will have 5 minutes to answer as many division facts as possible. The teacher will collect these assignments and any student who has gotten all 100 facts answered correctly will get a small prize the next day.  
  
**Learning Activities:**   
*Would My Answer be Positive or Negative?*:

The teacher will project the “Dividing Integers: Positive of Negative?” handout onto the SmartBoard. She will also distribute a copy of this handout to the class. The class will discuss what combinations of numbers yield positive answers and which cause negative answers. The class will then solve a few division problems as a whole class; the students will be called on to tell the class the next step to take in solving the problem at hand.   
  
*Work Together Time:*

The students will be given the same “Division Facts” worksheet that they did at the beginning of class; however, now some of the numbers will be positive and others will be negative. The students will work with a partner to complete this worksheet. The class will then go over this worksheet as a whole.   
  
*Timeline*:  
Set Induction: 5 minutes  
Would My Answer be Positive or Negative?: 15 minutes  
Work Together Time: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will quickly summarize what combinations of positive and negative integers yield positive answers when dividing and what combinations yield negative answers.

**Assessment:**

The teacher will observe student answers during class and collect their homework assignments. She will review their homework to better see where the students are struggling.

**Homework:**

The students will complete Homework Assignment #7.

**Materials:**

“Division Facts” Worksheet

SmartBoard

Pencils

Paper

“Multiplying Integers: Positive of Negative?” Handout

<http://www.math-drills.com/division/divone144_001.pdf>

Revised “Division Facts” Worksheet

“Dividing Integers:

Positive or Negative?”

|  |  |
| --- | --- |
| **Positive / Positive=Positive** | **Positive / Negative= Negative** |
| **Negative / Positive= Negative** | **Negative / Negative= Positive** |

**Is the signs are different (+,- or -,+), the answer will be negative.**

**If the signs are the same (+,+ or -,-) the answer will be positive.**

Grace Garlatti 7th Grade Math

**July 1, 2010**

**“Integers Here, Integers There!”**

**Objective (s):**

Students will be able to add subtract, multiply, and divide integers. .   
  
**Set Induction:**

The teacher will collect the homework from the previous night and answer any lingering questions on multiplying and dividing integers.   
  
**Learning Activities:**

*Explanation of Game*:

The teacher will explain that in the game “Mathpardy” students will choose to answer questions ranging from 100 to 1,000 points based on difficulty. Each student will be on his or her own team. The students will be given 30 seconds to answer each question. If they cannot answer the question in 30 seconds, another student will be given the chance to answer. Students will get the chance to answer by being the first one to raise his or her hand. (Only two students will be given the opportunity to answer a specific question.) If the student cannot correctly answer the question that they raised their hand to answer, points will be subtracted from their score; if they answer the question correctly, points will be added to their score. The students will keep their own scores.

*Mathpardy*: The students will participate in a game that is modeled after Jeopardy. The teacher will have the game board set up on the chalkboard that is similar to the game board on Jeopardy. Each card will have an addition, subtraction, multiplication, or division of integers problem on the back.

*Scoring*:

The students will track their scores themselves throughout the game because this will also show them how to work with positive and negative numbers in a real world setting. The teacher will have a discussion about honestly with the class when she explains that they will be keeping their own scores. After the game has been completed, that students will add up their final scores.   
  
*Timeline*:  
Set Induction: 5 minutes

Explanation of Game: 5 minutes  
Mathpardy: 20 minutes

Scoring: 5 minutes  
Closure: 10 minutes

**Closure:**

The teacher will go over any questions that no participant could answer during “Mathpardy.”

**Materials:**

Pencils

Paper

Chalkboard

Game Cards

Grace Garlatti 8th Grade Math

**June 28, 2010**

**“PEMDAS”**

**Objective (s):**

Students will be able to list the order in which operations should be performed (PEMDAS).

Students will be able to solve problems that require the use of PEMDAS.   
  
**Set Induction:**  
The teacher will talk to the students about acronyms such as SCUBA, ASAP, RSVP, NBA, ABC, NFL, etc.. She will then explain that PEMDAS

**Learning Activities:**   
*Acronyms, Acronyms!*: The teacher will explain that the acronym PEMDAS (parentheses, exponents, multiplication, division, subtraction) is usually remembered as “Please excuse my dear Aunt Sally.” The students will then have time to come up with their own acronym that will make the order of operations easy for them to remember. The students will share their acronyms with the rest of the class.   
  
*Order, Order!*:

The students will work with a partner to use PEMDAS to solve a problem. The students will attempt to solve the problem without teacher instruction. If a group of students is able to figure out the answer to they will help the teacher to explain the concept to the rest of the class. If no one is able to figure out the question the teacher will explain and then give the students a new problem to work on. When students get a question correct they will have to opportunity to explain their reasoning to the entire class.

*Timeline*:  
Set Induction: 5 minutes  
Acronyms, Acronyms!: 15 minutes  
Order, Order!: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will assign homework and ask the class if they have any questions.

**Assessment:**

The teacher will observe student answers during class and collect their homework assignments. She will review their homework to better see where the students are struggling.

**Homework:**

The students will complete Homework Assignment #5.

**Materials:**

Pencils

Paper

Chalk

Chalkboard

Name:­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8th Grade- Homework Assignment #5

**On a separate piece of paper, design a poster using your acronym for PEMDAS. We will use your posters to decorate the classroom!**

**Solve the following mathematical equations.**

1. 12 x 6 / 2=
2. 14 + 7 -12=
3. 15 / 5 + 17=
4. 24 x 2 / 6=
5. 12 – 2 /2=

Grace Garlatti 8th Grade Math

**June 29, 2010**

**“Exponents and the Equation”**

**Objective (s):**

Students will be able to solve problems that include exponents.

Students will be able to state the differences between expressions and equations.   
  
**Set Induction:**

The teacher will go over a few repeated addition problems with the class to repair them for the repeated multiplication they will do when they take a look at exponents.   
  
**Learning Activities:**   
*Exponents*:

The teacher will tell that students that an exponent is just a symbol for repeated multiplication. She will review a few pure exponent questions with the class and then have them work with a partner to solve two or more equations that involve exponents and PEMDAS. Each group of students will have different equations and will use the smart board to show their work to the class.

*THE EQUATION*:

The teacher will explain that the difference between an equation and an expression is that an equation has an equal sign and an expression does not. She will explain that many equations use variables and that each side of an equation must be equal. While each side of the equation must be equal, they might not look equal. The teacher will demonstrate that things may look different but are often the same by showing them that 8 tablespoons of water is equal to a half of cup. Each student will get a chance to participate in turning 8 tablespoons into a half of a cup to see this for themselves.   
  
*Timeline*:  
Set Induction: 5 minutes  
Exponents: 15 minutes  
THE EQUATION: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will assign homework and ask the class if they have any questions.

**Assessment:**

The teacher will observe student answers during class and collect their homework assignments. She will review their homework to better see where the students are struggling.

**Homework:**

The students will complete Homework Assignment #6.

**Materials:**

SmartBoard

Pencils

Paper

Water

Measuring Cup

Tablespoon

Name:­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8th Grade- Homework Assignment #6

**Solve the following problems. Remember to use PEMDAS.**

1. 6 + 3^3 -18 / 7=
2. 12 + 6 / 4 +2=
3. 4 + 1 x 4^2 – 3=
4. 16 + 4 x (8 + 2)=
5. (16 + 4) x (8 + 2)=

**In your own words, explain what an equation is. What is the difference between an equation and an expression? What is a special feature of an equation?**

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Grace Garlatti 8th Grade Math

**June 30, 2010**

**“One-Step Equations”**

**Objective (s):**

Students will be able to solve one-step equations.   
  
**Set Induction:**

The teacher will collect homework and go over any remaining questions students may have about the previous day’s lesson.   
  
**Learning Activities:**

Instructional Time:

The teacher will write a one-step equation on the board and teach the students two rules:

1. The same operation must be performed to both sides of the equation.
2. The variable must be isolated.

As a whole, the class will discuss what these rules mean and determine how they can state these rules in a way that is understandable to them.

Many examples will be used.

Independent Work:

The students will be asked to restate the rules in their binders in a way that makes sense to them. There will also be many problems on the board that they will be asked to solve. The teacher will travel around the room and clear up any misconceptions.

*Timeline*:  
Set Induction: 5 minutes

Instructional Time: 15 minutes

Independent Work Time: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will assign homework and ask the class if they have any questions.

**Assessment:**

The teacher will observe student answers during class and collect their homework assignments. She will review their homework to better see where the students are struggling.

**Homework:**

The students will complete Homework Assignment #7.

**Materials:**

SmartBoard

Pencils

Paper

Name:­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8th Grade- Homework Assignment #7

**Solve the following one-step equations.**

1. m – 17= -8
2. x – 255= 671
3. 36 + n= 75
4. -88 + z= 0
5. -87 + y= 19
6. 41 + k= 7
7. x + 14= 21

**Make up your own one-step equation and solve below.**

Grace Garlatti 8th Grade Math

**July 1, 2010**

**“Two-Step Equations”**

**Objective (s):**

Students will be able to solve two-step equations. .   
  
**Set Induction:**

The teacher will collect homework and go over any remaining questions students may have about the previous day’s lesson. She will write a few one-step equations on the board to give the students a little more practice.   
  
**Learning Activities:**

*Instructional Time*:

The teacher will explain that solving a two-step equation is similar to solving a one-step equation except it will take two-steps to accomplish the two core rules of equation solving:

1. The same operation must be performed to both sides of the equation.
2. The variable must be isolated.

Many examples will be used.

*Work Together Time:*

The students will work together with a partner to solve the equations on the “Do the Two-Step” worksheet. They will present the problem they create and its solution with the entire class using the SmartBoard.

*Timeline*:  
Set Induction: 5 minutes

Instructional Time: 15 minutes

Work Together Time: 20 minutes  
Closure: 5 minutes

**Closure:**

The teacher will go over any questions that no participant could answer during “Mathpardy.”

**Materials:**

Pencils

Paper

SmartBoard

“Do the Two-Step!” Worksheet

Name:­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

“Do the Two-Step!”

**Solve the following two-step equations.**

1. 4x – 17= 31
2. k/3 + 3= 8
3. 9n + 18=
4. 14= 5k -31
5. 15= m + 3
6. t/9 – 7= -5
7. 25- 13f= -14

**Make up your own two-step equation and solve below.**